What is claimed is:

1. A method for producing and applying at least one of an antiscatter grid and collimator to at least one of an x-ray and gamma detector having matricially arranged detector elements which form a detector surface with detection regions sensitive to at least one of x-radiation and gamma radiation and less sensitive intermediate regions, comprising:

producing a basic structure using a rapid prototyping technique to form transmission channels and intermediate walls of at least one of the antiscatter grid and collimator, including at least in a first direction, a center-to-center spacing at least one of equal to and an integral multiple of a center-to-center spacing of the sensitive detection regions of the detector;

coating the intermediate walls with a material which strongly absorbs at least one of x-radiation and gamma radiation; and

applying at least one of the antiscatter grid and collimator to the detector surface and connecting at least one of the antiscatter grid and collimator to the detector surface in such a way that at least one of the intermediate walls running perpendicular to the first direction and their coating, are situated over relatively less sensitive intermediate regions of the detector surface.

2. The method as claimed in claim 1, wherein a method of stereolithography is used as the rapid prototyping technique.

3. The method as claimed in claim 1, wherein a geometry of the basic structure is selected corresponding to the matricial arrangement of the detector elements so as to produce a cellular at least one of an antiscatter grid and collimator in the case of which the arrangement of transmission channels transmissive to at least one of x-radiation and gamma radiation corresponds to the arrangement of the sensitive detection regions.

4. The method as claimed in claim 1, wherein the basic structure is produced from a material which is substantially transparent to at least one of x-radiation and

gamma radiation, and end faces of the intermediate walls are kept free of the coating with the absorbing material.

5. The method as claimed in claim 1, wherein the basic structure is produced from a material which is substantially transparent to at least one of x-radiation and gamma radiation, and the coating with the absorbing material is removed from end faces of the intermediate walls.

6. The method as claimed in claim 1, wherein the coating is performed by at least one of sputtering and electrolytic deposition.

7. The method as claimed in claim 1, wherein at least one of the antiscatter grid and collimator is applied to the detector surface and connected to the detector surface in such a way that in each case a corner region of the coating with the absorbing material of a transmission channel is situated over a switching element of a detector element.

8. The method as claimed in claim 1, wherein at least one of the antiscatter grid and collimator is bonded to the detector surface.

9. The method as claimed in claim 8, wherein the bonding is carried out sequentially for juxtaposed subareas of the detector surface.

10. The method as claimed in claim 9, wherein, before being applied, at least one of the antiscatter grid and collimator is divided into segments which correspond to the subareas, applied sequentially in an individual fashion.

11. The method as claimed in claim 1, wherein at least one of the antiscatter grid and collimator is applied to the detector surface with the aid of a flip-chip technique.

12. The method as claimed in claim 11, wherein at least one of the antiscatter grid and collimator is applied to the detector surface with the aid of a holder supporting the basic structure.

13. The method as claimed in claim 1, wherein for bonding purposes an adhesive liquid is sprayed onto at least one of the detector surface, the antiscatter grid and the collimator.

14. The method as claimed in claim 1, wherein, for bonding purposes, a thermally melting adhesive is applied to at least one of the detector surface, the antiscatter grid and the collimator and is briefly melted by a heat source after the application of at least one of the antiscatter grid and collimator to the detector surface.

15. The method as claimed in claim 1, wherein the basic structure is constructed so as to produce a focused at least one of antiscatter grid and collimator.

16. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 1.

17. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 1.

18. The method as claimed in claim 2, wherein the coating is performed by at least one of sputtering and electrolytic deposition.

19. The method as claimed in claim 2, wherein at least one of the antiscatter grid and collimator is applied to the detector surface and connected to the detector surface in such a way that in each case a corner region of the coating with the absorbing material of a transmission channel is situated over a switching element of a detector element.

20. The method as claimed in claim 2, wherein at least one of the antiscatter grid and collimator is bonded to the detector surface.

21. The method as claimed in claim 20, wherein the bonding is carried out sequentially for juxtaposed subareas of the detector surface.

22. The method as claimed in claim 21, wherein, before being applied, at least one of the antiscatter grid and collimator is divided into segments which correspond to the subareas, applied sequentially in an individual fashion.

23. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 2.

24. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 2.

25. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 3.

26. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 3.

27. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 4.

28. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 4.

29. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 5.

30. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 5.

31. A method for producing and applying at least one of an antiscatter grid and collimator to at least one of an x-ray and gamma detector, comprising:

forming transmission channels and intermediate walls of at least one of the antiscatter grid and collimator using a rapid prototyping technique, including at least in a first direction, a center-to-center spacing at least an integral multiple of a center-to-center spacing of sensitive detection regions of the detector;

coating the intermediate walls with a material which strongly absorbs at least one of x-radiation and gamma radiation; and

applying the at least one of the antiscatter grid and collimator to the detector surface and connecting the at least one of the antiscatter grid and collimator to the detector surface in such a way that at least one of the intermediate walls running perpendicular to the first direction and their coating, are situated over relatively less sensitive intermediate regions of the detector surface.

32. The method as claimed in claim 31, wherein a method of stereolithography is used as the rapid prototyping technique.

33. An x-ray detector comprising matricially arranged detector elements and an antiscatter grid with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 31.

34. A gamma detector comprising matricially arranged detector elements and a collimator with transmission channels and intermediate walls with an absorbing coating, produced and applied by the method claimed in claim 31.